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BARNES & THORNBURG  
600 One Summit Square  
Fort Wayne, IN 46802

EXAMINER
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CHRISS, JENNIFER A

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/630,875  
Filing Date: July 30, 2003  
Appellant(s): BALTHES ET AL.

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Gregory S. Cooper  
For Appellant

**SUPPLEMENTAL EXAMINER'S ANSWER**

This is in response to the appeal brief filed December 14, 2007 appealing from the Office action mailed January 30, 2006.

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**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The amendment after final rejection filed on May 10, 2006 has been entered. In light of this, the objection of claim 22 is withdrawn as detailed in the Office Action dated 1/30/2006 and the 35 U.S.C. 112, 2<sup>nd</sup> paragraph rejection of claim 20 is withdrawn as detailed in the Office Action dated 1/30/2006.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows: Claim 23 – 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jarrard et al. (US 6,871,898).

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

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US 6,871,898	JARRARD ET AL.	03-2005
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US 5,709,925	SPENGLER et al.	01-1998
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**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 102***

Claims 19, 21 - 22, 26 and 43 are rejected under 35 U.S.C. 102(e) as being anticipated by Jarrard et al. (US 6,871,898).

Jarrard et al. is directed to a soft cover for vehicles and process for making (Title).

As to claim 19, Jarrard et al. teach a composite comprising a water resistant top layer, a flexible foam layer and a protective bottom layer (Abstract). See Figure 1. Jarrard et al. teach that the water resistant top layer can comprise a film wherein the film is water-resistant (column 3, lines 5 - 55). The Examiner equates the water resistant top layer to Appellant's "permeability-resistance film layer". Jarrard et al. teach that the flexible foam layer can comprise a thin layer of foam, preferably from 0.2 - 3 mm (column 4, lines 15 - 25), of a polymeric material (columns 4 - 5). The foam may be reinforced by fibers such as cotton, silk, wool or the like (column 5, lines 25 - 30). It should be noted that the fibers may be incorporated into the foam (column 5, lines 30 - 40), therefore, it is the position of the Examiner that the natural fibers are dispersed throughout the thickness of the foam layer. The Examiner equates the flexible foam layer to Appellant's "headliner core layer", the foam to Appellant's "binding resin" and the incorporated fibers to Appellant's "randomly-oriented natural fibers". Jarrard et al. teaches a bottom protective layer comprising a woven fabric having a stain resistant treatment such as PREFIXX or SCOTCHGUARD, a TEFLON coating or other treatments that provides satisfactory protection

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from incidental moisture or other assaults (column 6, lines 1 - 10). The Examiner equates the bottom protective layer of woven fabric to Appellant's "woven fiber layer" and the coating to Appellant's "film layer".

As to claim 21, Jarrard et al. teach that the woven fabric used for the protective bottom layer may be selected from the same materials suitable for use in the water-resistant top layer (column 5, lines 55 - 60). Jarrard et al. teaches that the woven fabric may comprise polyester (column 4, lines 5 - 10).

As to claim 22, Jarrard et al. teach that the woven fabric used for the protective bottom layer may be selected from the same materials suitable for use in the water-resistant top layer (column 5, lines 55 - 60). Jarrard et al. teach that the woven fabric may comprise cotton, polypropylene or a combination of these yarns (column 4, lines 5 - 10).

As to claim 26, Jarrard et al. teach that the film layer has a thickness ranging from about 0.1 - 0.6 mm (column 3). It should be noted that about 0.1 mm is approximately 4 mil.

As to claim 43, Jarrard et al. teach that the foam, or "binding resin", can comprise polypropylene (column 5, lines 15 - 30).

### ***Claim Rejections - 35 USC § 103***

Claim 23 – 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jarrard et al. (US 6,871,898).

As to claims 23 and 25, Jarrard et al. disclose the claimed invention except for that the film layer is polypropylene as required by claim 23 and the binding resin is a nylon film layer as required by claim 25. It would have been obvious to one having ordinary skill in the art at the

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time the invention was made to use a polypropylene film for the film layer as required by claim 23 and a nylon film layer for the binding resin as required by claim 25 since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of design choice. *In re Leshin*, 125 USPQ 416. In the present invention, one would have been motivated to use polypropylene as the film layer motivated by the cost and its stain resistance. It should be noted that Jarrard et al. teach that the coating is a stain resistant treatment; it is known in the art that polypropylene is stain resistant. In the present invention, one would have been motivated to use nylon due to its excellent strength, flexibility, toughness and elasticity. It should be noted that Jarrard et al. teaches that the plastic used for the foam may be any plastic which can be foamed; it is known in the art that nylon can be foamed.

As to claim 24, Jarrard et al. disclose the claimed invention except for that the film layer is 4 mil. Absent evidence of unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to create a film having a thickness of 4 mil, since it has been held that where general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454 USPQ 233 (CCPA 1955). In the present invention, one would have been motivated to optimize the film thickness in order to create a composite having optimal strength and flexibility.

Claims 20 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jarrard et al. (US 6,871,898) in view of Spengler et al. (US 5,709,925).

Jarrard et al. teach the claimed invention above but fails to teach that a portion of the randomly-oriented natural fibers can comprise sisal as required by claim 42.

Spengler et al. is directed to a multi-layered panel having a core including natural fibers (Title). Spengler et al. teach a laminate comprising a core including natural filler fibers embedded in a thermoplastic matrix and two cover layers (Abstract). Spengler teaches that the core layer includes a fibrous filler material which is preferably a natural fiber material (column 4, lines 59 - 61). Spengler et al. teach that the natural fiber material may include straw, cotton, flax, sisal, hemp, jute, or the like, or combinations thereof, and preferably includes flax and/or sisal (column 4, lines 59 - 64). Spengler et al. teach that the specific material to be used in a particular application can be selected depending upon the desired characteristics of the finished panel and depending on the current price and availability of various natural fibers (column 4, lines 59 - 69).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate sisal fibers as a portion of the natural fibers as suggested by Spengler et al. in the foam layer of Jarrard et al. motivated by the desire to use a functionally equivalent fiber based on the cost and availability various natural fibers and desired characteristics of the panel.

As to claim 20, Jarrard et al. in view of Spengler et al. discloses the claimed invention except for that the binding resin is present in the amount of 25 - 35% by weight, the sisal is present in an amount of about 35 - 45% by weight and the natural filler fibers are present in the amount of about 25 - 35% by weight. Absent evidence of unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to create a composite comprising binding resin present in the amount of 25 - 35% by weight, the sisal is present in an amount of about 35 - 45% by weight and the natural filler fibers are present in the

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amount of about 25 - 35% by weight, since it has been held that where general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454 USPQ 233 (CCPA 1955). In the present invention, one would have been motivated to optimize the amount of amount of sisal, binder and natural filler fiber to create a core with optimum strength and stability. Additionally, it should be noted that it has been held that "It is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose ....[T]he idea of combining them flows logically from their having been individually taught in the prior art." *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980). In this particular case, Jarrard et al. teach the use of natural fibers such as cotton to structurally reinforce a resin layer and Spengler et al. teach the use of natural fibers and combinations thereof including cotton and sisal to structurally reinforce a resin layer. In light of this case law, it would have been obvious to use a combination of both cotton (or other natural fibers disclosed by Jarrard et al. ) and sisal as disclosed by Spengler et al. to reinforce a resin layer.

#### **(10) Response to Argument**

Appellant argues that claim 19 is not anticipated under 35 USC 102(e) by Jarrard et al. (US 6,871,898). Appellant argues that, by definition, a headliner is a rigid structure that lines the ceiling of a vehicle whereas a convertible roof is the flexible and foldable ceiling of a vehicle. Appellant provides pictures of a flexible convertible roof and a rigid headliner. The Examiner respectfully argues that the claim only requires "a vehicle headliner" and not specifically claim a rigidity requirement nor does the Specification explicitly define a headliner as a rigid structure.



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Because Appellant does not clearly define the parameters of a headliner in the Specification, the Examiner has relied on Webster's Ninth New Collegiate Dictionary" for the definition of "headliner". According to the dictionary, a headliner is "the fabric covering the inside roof of an automobile". Please note that term "headliner" does not imply a certain rigidity and the convertible top of Jarrard et al. falls within the scope of the definition of a headliner.

Appellant notes that the Patent Office recognizes the distinctions between headliners and convertible roof tops. Appellant indicates that headliners are identified in class 296, subclass 214 while a flexible convertible top is identified with class 296, subclass 107.01. It should be noted that the chosen classes and subclasses used to classify various patents and publications are determined by the respective Examiner of each case. Although, Jarrard et al. is classified in 296/107.01, Jarrard et al. could also be classified under class 296, subclass 214 depending on the Examiner's interpretation of the subclass definition. It should be noted that subclass 214 depends from subclass 210 (roof structure), which relates to "the uppermost horizontal covering means for the passenger of a land vehicle, said covering may be formed from a rigid or *flexible* material and may be provided with an aperture and a movable or removable closure for said aperture". It should be noted that neither subclass 210 or 214 precludes a flexible structure or specifically requires a rigid structure.

Appellant argues that defining the claimed headliner as a mere "fabric" ignores and repudiates not the Specification but the claims themselves. Appellant argues that, contrary to Examiner's allegation, the Specification identifies a headliner to be "quite rigid" on page 11 of Appellant's Specification filed 7/26/03. It should be noted that the word "rigid" is mentioned once in the Specification, specifically on page 11. On page 11, Appellant describes one

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embodiment, where the composite has been shown to be “quite rigid under environmental testing conditions”. In one such test, “the laminated composite was subjected to a temperature of 95 degrees C. After the panel was allowed to cool for one hour to an ambient temperature of 23 degrees C, a cantilever test was conducted revealing a sag of about 1.27 millimeters. This is within a target deflection range of about 10 millimeters for a headliner application. Other panel *or headliner applications* may not require such a limited deflection range”. Although Appellant has provided an Example where the laminated composite was considered to be “quite rigid”, Appellant also notes that other headliners may not require such a target deflection which appears to be equated to rigidity. The Appellant describes an embodiment but does not actually explicitly *define* a headliner as a rigid material. Additionally, the claim does not require a particular target deflection. Appellant also notes that the Specification identifies sisal fibers as “providing stiffness as well as loft and standoff in high temperature environments”; the Examiner submits that this statement does not indicate a rigid headliner only a stiff filler material.

Appellant argues that the two Affidavits from one of the inventors includes evidence from an unrelated third-party demonstrating that headliners are known structures and that one skilled in the art knows headliners are rigid. The benchmark data provided is for class 3 recyclable headliners and the testing was specifically performed on a 2006 Toyota Headliner. The Appellant only provides data for a 2006 Toyota Headliner yet argues that the data is representative of a general headliner. The Examiner does not find the data to be persuasive as to requiring that the term “headliner” to be defined as a rigid structure.

Appellant argues that the definition of a headliner as “a fabric covering the inside roof of an automobile” contradicts the Examiner’s own view that the claimed headliner is a rigid

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structure. Appellant quotes various passages where the Examiner used phrases such as “stiff and rigid”, “good mechanical strength”, “core with optimal stiffness and stability” and “prevent the composite layers from bowing”. In none of those passages does the Examiner indicate that the term “headliner” is defined as a rigid material. The Examiner merely was describing the prior art used in the rejections.

Appellant argues that the definition provided by the Examiner in the Advisory Action dated 5/24/06 of “a fabric covering the inside roof of an automobile” contradicts the Examiner’s position and indicates there is no support in the specification, relevant art or claims themselves. As discussed above, the Examiner has not indicated that the term “headliner” is defined as a rigid structure. The Appellant does not provide in the Specification an explicit definition for the term “headliner”. As a result, the Examiner relied on Webster's Ninth New Collegiate Dictionary" for the definition of "headliner". According to the dictionary, a headliner is "the fabric covering the inside roof of an automobile". As noted in MPEP 2111.01, Heading III, using the ordinary meaning of the term is acceptable in the absence of an explicit definition in the Specification. The definition was provided for the first time in the Advisory Action dated 5/24/06 because it was the first time in prosecution an issue arose from the interpretation of “convertible top” structure as being encompassed by the term “headliner”. Appellant argues that the claims and Specification do not recite a single fabric layer; it should be noted that the claims and Specification, in some embodiments, require a woven fabric layer. It should be noted that the Merriam Webster dictionary does not require a single fabric layer and also does not preclude the use of other layers in conjunction with the fabric.

Appellant argues that Jarrard et al. (US 6,871,898) fail to anticipate either expressly or inherently at least “a vehicle headliner”, “a headliner core layer” and “a film layer”. The Examiner has discussed above how Jarrard et al. do teach Appellant’s claimed “vehicle headliner”. It should be noted that, as discussed above, that the “headliner core” is met by Jarrard et al. for the same reasons that Jarrard et al. teaches “a vehicle headliner”. The Appellant does not define in the Specification that a “headliner core” is rigid. Appellant argues that the randomly-oriented natural fibers of Jarrard et al. are not dispersed throughout the layer’s thickness as required by Appellant’s claim. Jarrard et al. teach that fibers may be laminated into the foam, incorporated into the foam or otherwise compounded into the form (see column 5, lines 35 – 40 of Jarrard et al. ). The Appellant indicates that “laminated into the foam” implies a surface concentration of fibers. It should be noted that the Examiner did not rely on the teaching of “laminated into the foam” but rather the teaching of being “incorporated into the foam”. The Examiner submits that the natural fibers are dispersed throughout the thickness of the foam layer and that Jarrard et al. teach Appellant’s claim limitations.

Appellant argues that Jarrard et al. do not teach a film layer located over the woven layer opposite to the headliner core layer. Appellant argues that a film layer has been defined in prosecution as “an extremely thin continuous sheet of substrate that may or may not be in contact with the substrate”. The Appellant argues that the Examiner has previously agreed that individually treated fibers is not a film layer. It should be noted that Jarrard et al. is not the same as the reference discussed in the Affidavit of 2/28/05 as Jarrard et al. teach a coating on the woven substrate (see column 6, lines 1 – 10 of Jarrard et al. ) and not individual treatment of

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fibers. The Examiner submits that the coating would be “an extremely thin continuous sheet of a substance that may or may not be in contact with the substrate”.

In regards to the rejection of claims 23 - 25 under 35 U.S.C. 103(a) as being unpatentable over Jarrard et al. (US 6,871,898), the Appellant is not responsive. The brief does not present for appeal the rejection of claims 23 – 25 as being unpatentable over Jarrard. As such, the obviousness of those claims is considered conceded.

Appellant argues that the combination of Jarrard et al. and Spengler et al. fail to teach the claimed invention of either claims 20 and 42. Appellant argues that there is no motivation to use the sisal of Spengler et al. in the panel of Jarrard et al. based on the fact that Jarrard et al. teach a flexible cloth top and Spengler teaches a rigid trim panel. The Examiner submits that both references are directed to roof panels in a car and that, despite the fact that the panel of Jarrard et al. is flexible, the panel still requires a level of integrity (i.e. strength) to be appropriate for a roof panel. Additionally, Jarrard et al. teach using natural fibers for incorporation into the foam layer but is not specific to all the types of suitable natural fibers. Spengler et al. is used to provide motivation to choose sisal based on the desired characteristics of the panel and based on availability and cost as it is a suitable material for use in a roof panel. The Examiner submits that the combination of Jarrard et al. and Spengler et al. is valid.

The Reply Brief filed on 12/28/07 has been entered and considered. The Application has been forwarded to the Board of Patent Appeals and Interferences for decision on the appeal. The Examiner has stated her position above.

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**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Jennifer A Chriss/  
Examiner, Art Unit 1794

/Ula C Ruddock/  
Primary Examiner, Art Unit 1794

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